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ABSTRACT

This Ohio Competency Analysis Profile (OCAP), derived from a modified Developing a Curriculum (DACUM) process, is a comprehensive and verified employer competency list for a swine producer program. It contains units (with or without subunits), competencies, and competency builders that identify the occupational, academic, and employability skills needed to enter this occupation. Within the outline are three levels of items: core, advancing, and futuring. Core items are essential to entry-level employment and are required to be taught and will be the basis for questions on the state vocational competency tests. Advancing items are needed to advance in a given occupation. Futuring items are needed to enter and remain in a given occupation 3 to 4 years from now. This OCAP contains 11 units: (1) general safety precautions; (2) animal care; (3) genetics, reproduction, and breeding; (4) waste handling and disposal; (5) nutrition, feeds, and feeding; (6) herd health; (7) marketing; (8) business management; (9) agricultural mechanics; (10) crop and forage production; and (11) employability skills. (YLB)

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OCAP

OHIO'S COMPETENCY ANALYSIS PROFILE

SWINE PRODUCER

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Ohio's Future at Work

Division of Vocational and Career Education
Ohio Department of Education

Vocational Instructional Materials Laboratory
Center on Education and Training for Employment

THE OHIO STATE UNIVERSITY

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What is OCAP?

"A comprehensive and verified employer competency list will be developed and kept current for each program." This is the second objective of Imperative 3 of the *Action Plan for Accelerating the Modernization of Vocational Education: Ohio's Future at Work*. Ohio's Competency Analysis Profile (OCAP) lists are the Division of Vocational and Career Education's response to that objective. OCAP lists evolve from a modified DACUM process involving business, industry, labor, and community agency representatives from throughout Ohio. The OCAP process is directed by the Vocational Instructional Materials Laboratory at The Ohio State University's Center on Education and Training for Employment.

How is OCAP used?

Each OCAP contains units (with and without subunits), competencies, and competency builders that identify the occupational, academic, and employability skills needed to enter a given occupation or occupational area. Within that outline there are three levels of items: core, advancing, and futuring. Core items are essential to entry-level employment. These items are required to be taught and will be the basis for questions on the state vocational competency tests (scheduled to begin in FY93). Advancing items (marked with one asterisk) are needed to advance in a given occupation. Futuring items (marked with two asterisks) are needed to enter and remain in a given occupation three to four years from now.

Districts may add as many units, subunits, competencies, and competency builders as desired to reflect local employment needs, trends, and specialties. Local advisory committees should be actively involved in the identification and verification of additional items. Using OCAP lists, instructors will be able to formulate their courses of study and monitor competency gains via the new competency testing program.

The **Employability Skills** portion of this list was verified by the following employer panel:

Gary J. Corrigan, *Dana Corporation*, Ottawa Lake, Michigan
David Crooks, *Bowling Green State University Union Food Service*, Bowling Green, Ohio
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Ronald Simmons, *Former GM Executive*, Warren Ohio

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Ohio Competency Analysis Profile
Swine Producer

Unit 1: General Safety Precautions

Competency 1.0.1: Maintain safe work environment

Competency Builders:

1.0.1.1 Read and follow safety information
1.0.1.2 Organize and maintain clean, neat, and safe work area
1.0.1.3 Identify and correct safety hazards (e.g., manure pits)
1.0.1.4 Maintain and install safety devices
1.0.1.5 Provide well-lighted work area
1.0.1.6 Ventilate work areas
1.0.1.7 Identify and safely handle hazardous materials
1.0.1.8 Store hazardous materials (e.g., medications, insecticides, and similar materials)
1.0.1.9 Clean up and dispose of hazardous materials
1.0.1.10 Comply with Environmental Protection Agency (EPA) regulations and recognize when to call government agencies for cleanup and disposal of hazardous waste materials
1.0.1.11 Comply with Occupational Safety and Health Administration (OSHA) regulations
1.0.1.12 Comply with on-farm policies
1.0.1.13 Comply with Ohio Department of Agriculture Applicator's License**
1.0.1.14 Provide employee health inservicing**

Competency 1.0.2: Apply safe work habits

Competency Builders:

1.0.2.1 Wear protective clothing and equipment
1.0.2.2 Use safe lifting and carrying methods
1.0.2.3 Administer first aid
1.0.2.4 Follow safety directions on hazardous material labels
1.0.2.5 Use correct fire extinguishers
1.0.2.6 Recognize symptoms of chemical injury or poisoning
1.0.2.7 Handle compressed gases
1.0.2.8 Maintain and use slow-moving-vehicle signs when operating vehicles on road
1.0.2.9 Prevent riders on agricultural and industrial equipment not designed for riders
1.0.2.10 Use safe animal-handling practices
1.0.2.11 Identify and report all potentially hazardous working conditions

* Advancing
** Futuring

Competency 1.0.3: Operate and maintain equipment and facilities

Competency Builders:

1.0.3.1 Follow safety rules for facilities and equipment operation and maintenance
1.0.3.2 Operate equipment defensively
1.0.3.3 Maintain safety shields on all equipment
1.0.3.4 Shut down and lock out power equipment before clearing obstructions or servicing and adjusting equipment (e.g., circuit breakers)
1.0.3.5 Post and maintain danger signs
1.0.3.6 Recognize hazards of working near above-ground and below-ground public utilities
1.0.3.7 Follow correct procedures when working in silos and manure-handling facilities
1.0.3.8 Follow manufacturer's service recommendations

Competency 1.0.4: Follow emergency response procedures

Competency Builders:

1.0.4.1 Check that all emergency response kit components are in place
1.0.4.2 Maintain emergency telephone number list
1.0.4.3 Post emergency telephone number list in designated place
1.0.4.4 Instruct others in emergency procedures
1.0.4.5 Identify emergency situation
1.0.4.6 Contact proper personnel
1.0.4.7 Secure area
1.0.4.8 Use emergency response kit to contain emergency
1.0.4.9 Follow equipment start-up/shut-down procedures

Unit 2: Animal Care

Competency 2.0.1: Perform general animal care procedures

Competency Builders:

2.0.1.1 Follow general safety precautions
2.0.1.2 Identify parts of animal anatomy
2.0.1.3 Follow animal identification system
2.0.1.4 Weigh animals
2.0.1.5 Bed animals
2.0.1.6 Demonstrate caring attitude toward animals

Competency 2.0.2: Restrain, handle, or move animals

Competency Builders:

2.0.2.1 Follow general safety precautions
2.0.2.2 Pen animals according to individual operation requirements (e.g., number, size, weight, sex, temperament, production, and health)
2.0.2.3 Isolate and observe newly purchased animals
2.0.2.4 Restrain animals
2.0.2.5 Prepare carriers
2.0.2.6 Identify shipping regulations for hogs
2.0.2.7 Load and unload animals

Unit 3: Genetics, Reproduction, and Breeding

Competency 3.0.1: Select animals

Competency Builders:

3.0.1.1 Identify type of operation (e.g., purebred or commercial)
3.0.1.2 Identify breed(s)
3.0.1.3 Select breed(s)
3.0.1.4 Verify age, health, and soundness of animal
3.0.1.5 Analyze production records and pedigrees
3.0.1.6 Evaluate registration papers for purebred animals
3.0.1.7 Select on basis of body type, conformation, and breeding qualities
3.0.1.8 Use probe to determine backfat thickness
3.0.1.9 Use ultrasound to determine loin eye size
3.0.1.10 Select on basis of heritability of traits
3.0.1.11 Evaluate potential herd sources
3.0.1.12 Select on basis of market specifications
3.0.1.13 Determine guidelines for selecting donor sows for embryo transfer*

Competency 3.0.2: Plan breeding program

Competency Builders:

3.0.2.1 Identify parts and understand functions of reproductive system
3.0.2.2 Determine age and/or weight for breeding
3.0.2.3 Evaluate artificial versus natural insemination
3.0.2.4 Determine number of boars needed for herd
3.0.2.5 Determine number of sows needed to maintain facility at desired levels
3.0.2.6 Evaluate boar's fertility and soundness
3.0.2.7 Determine heat synchronization program
3.0.2.8 Schedule breeding intervals or times
3.0.2.9 Determine insemination time
3.0.2.10 Arrange semen services
3.0.2.11 Determine flushing program
3.0.2.12 Evaluate body condition
3.0.2.13 Evaluate embryo transfer, embryo transplant, and superovulation program*
3.0.2.14 Determine embryo deposit time*
3.0.2.15 Use genetic engineering to improve animal traits**
3.0.2.16 Use bovine somatotropin (BST) to improve growth rate**

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** Futuring

Competency 3.0.3: Breed animals

Competency Builders:

3.0.3.1 Follow general safety precautions
3.0.3.2 Detect heat in sows and gilts before breeding
3.0.3.3 Use hand mating
3.0.3.4 Use pen mating
3.0.3.5 Use pasture mating
3.0.3.6 Collect semen from boar
3.0.3.7 Handle and store semen
3.0.3.8 Breed using artificial insemination
3.0.3.9 Schedule pregnancy checks
3.0.3.10 Use ultrasound to determine pregnancy
3.0.3.11 Determine farrowing dates
3.0.3.12 Identify infertile animals
3.0.3.13 Arrange medical intervention for slow-to-conceive animals*
3.0.3.14 Synchronize heat cycles of females**
3.0.3.15 Synchronize farrowing**

Competency 3.0.4: Care for newborn piglets

Competency Builders:

3.0.4.1 Follow general safety precautions
3.0.4.2 Check newborn piglets for physical deformities or health problems
3.0.4.3 Administer artificial respiration to newborn piglets
3.0.4.4 Revive chilled newborn piglets
3.0.4.5 Administer preventive health measures
3.0.4.6 Assist nursing
3.0.4.7 Clip navel cords and apply disinfectant
3.0.4.8 Notch ears for identification
3.0.4.9 Clip needle teeth
3.0.4.10 Castrate piglets 5 to 10 days after birth
3.0.4.11 Dock and treat tails
3.0.4.12 Use cross-fostering procedures on piglets
3.0.4.13 Administer iron and other injections
3.0.4.14 Stomach-tube piglets
3.0.4.15 Place piglets in brooder or use heat lamp
3.0.4.16 Offer supplementary milk supply

Competency 3.0.5: Care for mothers

Competency Builders:

3.0.5.1 Follow general safety precautions
3.0.5.2 Identify signs of approaching parturition
3.0.5.3 Prepare facilities for parturition
3.0.5.4 Prepare mothers for parturition
3.0.5.5 Assist mothers during delivery
3.0.5.6 Recognize farrowing disorders
3.0.5.7 Check mothers for expelled placentas
3.0.5.8 Remove afterbirth from farrowing area
3.0.5.9 Check teats for milk flow
3.0.5.10 Observe postparturition

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Unit 4: Waste Handling and Disposal

Competency 4.0.1: Manage waste handling and disposal system*

Competency Builders:

4.0.1.1 Identify agencies that control waste-handling regulations*
4.0.1.2 Follow local, state, and federal regulations*
4.0.1.3 Determine manure application methods and rates*
4.0.1.4 Determine factors affecting water quality*
4.0.1.5 Plan waste storage handling system to maintain nutrient value*
4.0.1.6 Follow government regulations pertaining to waste disposal**

Competency 4.0.2: Handle and dispose of waste

Competency Builders:

4.0.2.1 Follow general safety precautions
4.0.2.2 Apply manure at acceptable rates on appropriate fields
4.0.2.3 Operate and maintain equipment
4.0.2.4 Control runoff from feedlots and housing quarters
4.0.2.5 Dispose of dead animals according to regulations

Unit 5: Nutrition, Feeds, and Feeding

Competency 5.0.1: Determine nutrient requirements*

Competency Builders:

5.0.1.1 Evaluate production requirements*
5.0.1.2 Evaluate reproduction requirements*
5.0.1.3 Evaluate growth requirements*
5.0.1.4 Evaluate maintenance requirements*
5.0.1.5 Evaluate effects of nutritional requirements*
5.0.1.6 Evaluate effects of environmental factors on nutritional requirements*
5.0.1.7 Determine water requirements (e.g., flow rates)*
5.0.1.8 Identify factors that cause changes in appetite*

Competency 5.0.2: Determine nutritive value of feedstuffs*

Competency Builders:

5.0.2.1 Classify feeds according to major nutrient groups*
5.0.2.2 Identify factors influencing feedstuff quality*
5.0.2.3 Collect feedstuff samples for nutrient analysis*
5.0.2.4 Interpret nutrient analysis methods and results*
5.0.2.5 Interpret feed tag and label regulations*
5.0.2.6 Interpret feed composition tables*

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Competency 5.0.3: Balance rations*

Competency Builders:

5.0.3.1 Select feeds and additives*
5.0.3.2 Identify desired nutrient levels*
5.0.3.3 Use Pearson square method*
5.0.3.4 Determine costs*
5.0.3.5 Substitute feedstuffs and evaluate their effects*
5.0.3.6 Evaluate and report ration palatability*
5.0.3.7 Interpret feed additive withdrawal laws and regulations*

Competency 5.0.4: Feed and water animals

Competency Builders:

5.0.4.1 Follow general safety precautions
5.0.4.2 Identify feeds
5.0.4.3 Follow feeding guidelines
5.0.4.4 Follow feed additive-mixing regulations
5.0.4.5 Grind and mix feedstuffs
5.0.4.6 Prepare mineral mixes
5.0.4.7 Select premix
5.0.4.8 Select feeding method
5.0.4.9 Feed animals using self-feeding
5.0.4.10 Wean piglets
5.0.4.11 Feed milk-replacer to piglets
5.0.4.12 Start piglets on grain
5.0.4.13 Allocate feed to growing and mature animals
5.0.4.14 Precondition animals for shipping
5.0.4.15 Precondition animals for feedlot
5.0.4.16 Observe animals for changes in appetite
5.0.4.17 Identify reactions to flavors, enzymes, molds, and microtoxins
5.0.4.18 Provide adequate water
5.0.4.19 Maintain water quality
5.0.4.20 Feed increased number of rations throughout production cycle**

Competency 5.0.5: Maintain feeding area

Competency Builders:

5.0.5.1 Adjust self-feeders
5.0.5.2 Clean and adjust waterers
5.0.5.3 Identify and remove spoiled feedstuffs
5.0.5.4 Control feed waste
5.0.5.5 Clean and repair equipment

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Unit 6: Herd Health

Competency 6.0.1: Treat health problems

Competency Builders:

6.0.1.1 Follow general safety precautions
6.0.1.2 Recognize symptoms of illness
6.0.1.3 Recognize and treat injuries
6.0.1.4 Recognize symptoms of nutritional deficiency or toxicity
6.0.1.5 Identify symptoms of internal and external parasites
6.0.1.6 Take animal's temperature
6.0.1.7 Select equipment to administer treatment
6.0.1.8 Use equipment to administer treatment
6.0.1.9 Mark treated animal
6.0.1.10 Record treatment
6.0.1.11 Identify material needed for treatment*
6.0.1.12 Determine amount of material needed for treatment*

Competency 6.0.2: Prevent health problems

Competency Builders:

6.0.2.1 Follow general safety precautions
6.0.2.2 Develop and follow vaccination program
6.0.2.3 Dust animals
6.0.2.4 Spray animals
6.0.2.5 Worm animals
6.0.2.6 Exercise penned animals
6.0.2.7 Provide clean, dry, draft-free environment
6.0.2.8 Maintain high level of sanitation
6.0.2.9 Disinfect boots and clothing
6.0.2.10 Control flow of people and animals through facility
6.0.2.11 Select and use cleaning chemicals, insecticides, and equipment
6.0.2.12 Evaluate condition of animals
6.0.2.13 Isolate injured or diseased animals
6.0.2.14 Determine when to call veterinarian
6.0.2.15 Produce closed herds**

Competency 6.0.3: Manage medications, chemicals, and instruments

Competency Builders:

6.0.3.1 Follow general safety precautions
6.0.3.2 Store properly labeled medications and chemicals
6.0.3.3 Dispose of unused or outdated medications and chemicals
6.0.3.4 Dispose of used syringes and needles
6.0.3.5 Calculate cost of treatments
6.0.3.6 Maintain inventory-and-use record
6.0.3.7 Follow government regulations
6.0.3.8 Follow new and updated government regulations**

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Unit 7: Marketing

Competency 7.0.1: Analyze market*

Competency Builders:

7.0.1.1 Evaluate marketing opportunities*
7.0.1.2 Research demand for finished product (i.e., wholesale cuts, retail cuts, live animals)*
7.0.1.3 Evaluate effect market grades have on market prices*
7.0.1.4 Verify daily cash and future prices and determine local basis*
7.0.1.5 Calculate net market prices*
7.0.1.6 Interpret market reports*
7.0.1.7 Analyze market cycles and trends*
7.0.1.8 Develop increased awareness of market demand**
7.0.1.9 Consolidate packers**

Competency 7.0.2: Establish marketing plans*

Competency Builders:

7.0.2.1 Evaluate options of feeding grains, marketing grains, or purchasing feeds*
7.0.2.2 Evaluate livestock marketing options*
7.0.2.3 Determine when to market*
7.0.2.4 Determine most economical animal weight at which to market*
7.0.2.5 Develop marketing plan*
7.0.2.6 Contract production**

Competency 7.0.3: Market products

Competency Builders:

7.0.3.1 Sort and mark animals for market
7.0.3.2 Determine individual buyer requirements
7.0.3.3 Estimate market grades
7.0.3.4 Identify USDA grades
7.0.3.5 Verify market grades or classes of products sold
7.0.3.6 Consign animals to sales
7.0.3.7 Prepare advertisements and promotional activities*
7.0.3.8 Complete delayed price transaction*
7.0.3.9 Complete hedging transaction*
7.0.3.10 Complete forward contract transaction*
7.0.3.11 Use standardized electronic marketing**

Competency 7.0.4: Ship products

Competency Builders:

7.0.4.1 Follow general safety precautions
7.0.4.2 Arrange crop or livestock transport
7.0.4.3 Inspect vehicle for hazards
7.0.4.4 Prepare vehicle and load crops or livestock
7.0.4.5 Transport and unload crops or livestock
7.0.4.6 Calculate livestock shrinkage
7.0.4.7 Verify weights, grades, and prices on sales ticket

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Unit 8: Business Management

Competency 8.0.1: Perform general office work

Competency Builders:

8.0.1.1 Process mail
8.0.1.2 Establish filing system
8.0.1.3 File materials
8.0.1.4 Schedule and hold appointments
8.0.1.5 Use telephone
8.0.1.6 Write correspondence
8.0.1.7 Type materials
8.0.1.8 Operate calculator or other tabulating device
8.0.1.9 Operate computer
8.0.1.10 Use two-way radio

Competency 8.0.2: Perform general banking procedures

Competency Builders:

8.0.2.1 Write checks
8.0.2.2 Prepare bank deposit slips and make bank deposits
8.0.2.3 Balance bank statements
8.0.2.4 Use electronic banking procedures

Competency 8.0.3: Perform inventory

Competency Builders:

8.0.3.1 Establish inventory system
8.0.3.2 Take physical inventory of structures, facilities, equipment, and livestock
8.0.3.3 Calculate amount of grain and forage in storage
8.0.3.4 Determine capacity of storage facilities
8.0.3.5 Categorize inventory items as current, intermediate, or long-term assets
8.0.3.6 Determine current market value of inventory items
8.0.3.7 Determine cost of carrying inventory

Competency 8.0.4 Maintain supplies

Competency Builders:

8.0.4.1 Set minimum and maximum inventory levels
8.0.4.2 Determine what to purchase or order
8.0.4.3 Determine quantity to purchase or order
8.0.4.4 Determine when to purchase or order
8.0.4.5 Compare costs and quality of supplies from different sources
8.0.4.6 Make maximum use of vendor discounts
8.0.4.7 Calculate shipping charges
8.0.4.8 Regulate storage facility environment
8.0.4.9 Clean storage area
8.0.4.10 Inspect storage area for damage and hazards
8.0.4.11 Use approved pest-control procedures
8.0.4.12 Use computer to control inventory levels**

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Competency 8.0.5: Supervise and manage labor

Competency Builders:

8.0.5.1 Determine amount of labor needed
8.0.5.2 Evaluate hiring labor versus contracting services
8.0.5.3 Prepare for periods of peak work loads
8.0.5.4 Establish pay scale, benefits, and incentives
8.0.5.5 Plan work schedules
8.0.5.6 Train workers
8.0.5.7 Evaluate worker performance
8.0.5.8 Establish job termination procedures
8.0.5.9 Comply with rules governing employers' and employees' responsibilities
8.0.5.10 Comply with Workers' Compensation regulations
8.0.5.11 Follow state and federal wage and labor regulations*
8.0.5.12 Hire workers*
8.0.5.13 Use electronic communications**

Competency 8.0.6: Complete financial and tax records*

Competency Builders:

8.0.6.1 Maintain record-keeping system*
8.0.6.2 Record receipts, expenses, and mileage*
8.0.6.3 Use computer to maintain financial records*
8.0.6.4 Maintain livestock and crop enterprise records*
8.0.6.5 Maintain records of accounts payable and receivable*
8.0.6.6 Evaluate cash versus accrual reporting methods*
8.0.6.7 Maintain payroll records*
8.0.6.8 Determine depreciation method*
8.0.6.9 Compute book value of depreciable assets*
8.0.6.10 Calculate and record depreciation*

Competency 8.0.7: Complete general records

Competency Builders:

8.0.7.1 Maintain consumption records for fuel, oil, and hydraulic fluid
8.0.7.2 Maintain inventory records
8.0.7.3 Maintain crop production records
8.0.7.4 Maintain livestock production records (e.g., pounds of pork produced, pigs per crate, pigs weaned per sow per year)
8.0.7.5 Maintain pedigree records
8.0.7.6 Maintain equipment service records
8.0.7.7 Maintain labor records
8.0.7.8 Maintain health records
8.0.7.9 Maintain accident records
8.0.7.10 Determine field acreage using actual measurements and scale maps
8.0.7.11 Interpret farm map including field boundaries, major soil types, topography, vegetation, surface drainage, and travel areas
8.0.7.12 Draw and interpret farm map of subsurface drainage system
8.0.7.13 Update subsurface drainage system records (e.g., utilities, water, electric, phone, gas)
8.0.7.14 Use standardized electronic records**

Competency 8.0.8: Summarize and analyze business records*

Competency Builders:

8.0.8.1 Make ten-month summary of cash expenses and receipts*
8.0.8.2 Calculate efficiency factors*
8.0.8.3 Calculate family labor and management income*
8.0.8.4 Determine net income and profit*
8.0.8.5 Analyze and compare use of capital with standards for similar farms*
8.0.8.6 Prepare income statement*
8.0.8.7 Prepare balance sheet*
8.0.8.8 Determine effectiveness of management practices*

Competency 8.0.9: Apply time-management skills

Competency Builders:

8.0.9.1 Establish time-management system
8.0.9.2 Prioritize duties
8.0.9.3 Use technology (e.g., project management software) to enhance management skills

Competency 8.0.10: Manage finances

Competency Builders:

8.0.10.1 Develop cash flow projections
8.0.10.2 Establish budget
8.0.10.3 Identify credit strengths and weaknesses
8.0.10.4 Evaluate risks of using borrowed capital
8.0.10.5 Plan one-year, intermediate, and long-term credit needs
8.0.10.6 Identify and evaluate credit sources
8.0.10.7 Evaluate loan repayment terms and conditions
8.0.10.8 Negotiate credit plan
8.0.10.9 Calculate cost of loan
8.0.10.10 Fill out loan application
8.0.10.11 Make loan payments

Competency 8.0.11: Contribute to growth of swine industry

Competency Builders:

8.0.11.1 Conduct promotional activities
8.0.11.2 Encourage legislation supporting swine industry
8.0.11.3 Participate in swine professional organizations
8.0.11.4 Attend inservice education
8.0.11.5 Read and use professional journals and magazines

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Competency 8.0.12: Prepare and file tax forms*

Competency Builders:

8.0.12.1 Calculate property taxes*
8.0.12.2 Determine amount of social security to be paid*
8.0.12.3 Complete tax exemption form*
8.0.12.4 Estimate income tax*
8.0.12.5 Prepare federal income tax FICA schedule*
8.0.12.6 Prepare federal income tax capital gains or loss schedule*
8.0.12.7 Prepare federal income tax form 1040*
8.0.12.8 Prepare state income tax form*
8.0.12.9 Apply for refund for nonhighway use of federal and state fuel tax*
8.0.12.10 Consult and/or select tax consultant*

Competency 8.0.13: Plan insurance coverage*

Competency Builders:

8.0.13.1 Determine type and amount of insurance needed*
8.0.13.2 Evaluate different types of insurance*
8.0.13.3 Complete insurance application*
8.0.13.4 Complete and file claim forms*
8.0.13.5 Consult farm business manager (farm insurance agent)*

Competency 8.0.14: Obtain land*

Competency Builders:

8.0.14.1 Establish land-use plan*
8.0.14.2 Determine amount of land needed*
8.0.14.3 Determine amount of capital available for obtaining land*
8.0.14.4 Determine cost effectiveness of purchasing, leasing, or renting land*
8.0.14.5 Appraise available land and identify factors influencing use*
8.0.14.6 Evaluate and complete lease agreement*
8.0.14.7 Determine when to purchase land*
8.0.14.8 Evaluate and complete purchase agreement*
8.0.14.9 Evaluate lending sources*
8.0.14.10 Meet contract terms to have adequate land for number of animals**

Competency 8.0.15: Plan structures*

Competency Builders:

8.0.15.1 Estimate structure needs*
8.0.15.2 Analyze potential of existing facilities or buildings*
8.0.15.3 Determine whether to build or lease structures*
8.0.15.4 Analyze environmental impact of proposed building site*
8.0.15.5 Determine locations of new structures*
8.0.15.6 Determine zoning requirements*
8.0.15.7 Calculate construction, remodeling, upgrading, and repair costs on per-unit basis*
8.0.15.8 Calculate returns expected from structure investments on per-unit basis*
8.0.15.9 Plan for more units per person**

Competency 8.0.16: Manage equipment program*

Competency Builders:

8.0.16.1 Determine equipment needs*
8.0.16.2 Determine whether to repair or trade in equipment*
8.0.16.3 Evaluate advantages and disadvantages of different types and brands of equipment*
8.0.16.4 Determine whether to purchase equipment, lease equipment, or hire work done*
8.0.16.5 Determine feasibility of doing custom work for others*
8.0.16.6 Estimate returns expected from equipment investments*
8.0.16.7 Evaluate joint ownership of equipment*

Competency 8.0.17: Purchase livestock*

Competency Builders:

8.0.17.1 Identify purchase sources*
8.0.17.2 Comply with regulations pertaining to interstate shipment of livestock*
8.0.17.3 Evaluate raising versus buying replacements*
8.0.17.4 Negotiate purchase price*

Competency 8.0.18: Enter, establish, and expand business*

Competency Builders:

8.0.18.1 Develop enterprise goals*
8.0.18.2 Evaluate costs and returns for various enterprises*
8.0.18.3 Evaluate options of sole proprietorships, cooperatives, corporations, or partnerships*
8.0.18.4 Evaluate specialization versus diversification*

Competency 8.0.19: Plan retirement and estate*

Competency Builders:

8.0.19.1 Evaluate retirement program options*
8.0.19.2 Plan orderly transfer of property*
8.0.19.3 Sell or transfer ownership of farm*
8.0.19.4 Develop plan for bestowing estate*
8.0.19.5 Identify payment methods for estate and gift taxes*
8.0.19.6 Make a will*
8.0.19.7 Use professional estate planner*

Unit 9: Agricultural Mechanics

Competency 9.0.1: Service cooling systems for large engines

Competency Builders:

9.0.1.1 Follow general safety precautions
9.0.1.2 Test antifreeze content
9.0.1.3 Add coolant
9.0.1.4 Replace hoses

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9.0.1.5 Flush cooling system
9.0.1.6 Test thermostat
9.0.1.7 Replace thermostat
9.0.1.8 Replace water pump
9.0.1.9 Adjust or replace fan belt
9.0.1.10 Replace radiator
9.0.1.11 Inspect for leaks
9.0.1.12 Troubleshoot problems

Competency 9.0.2: Service fuel and air systems for large engines

Competency Builders:

9.0.2.1 Follow general safety precautions
9.0.2.2 Service air cleaner
9.0.2.3 Bleed diesel fuel system
9.0.2.4 Service fuel strainer, filters, and sediment bowl
9.0.2.5 Clean carburetor
9.0.2.6 Adjust engine governor
9.0.2.7 Replace exhaust system components
9.0.2.8 Replace fuel pump
9.0.2.9 Troubleshoot problems
9.0.2.10 Perform basic carburetor overhaul*
9.0.2.11 Adjust engine valves*

Competency 9.0.3: Service lubrication systems

Competency Builders:

9.0.3.1 Follow general safety precautions
9.0.3.2 Select oil
9.0.3.3 Change oil and oil filters
9.0.3.4 Troubleshoot problems

Competency 9.0.4: Lubricate equipment

Competency Builders:

9.0.4.1 Grease or oil joints
9.0.4.2 Maintain grease fittings
9.0.4.3 Repack bearings
9.0.4.4 Remove and replace grease seal
9.0.4.5 Define characteristics of grease and greaseless (sealed) bearings

Competency 9.0.5: Maintain and service electrical systems

Competency Builders:

9.0.5.1 Follow general safety precautions
9.0.5.2 Install battery
9.0.5.3 Clean and treat battery terminals, cables, and battery box
9.0.5.4 Charge battery

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9.0.5.5 Replace fuses and light bulbs
9.0.5.6 Replace distributor cap and rotor
9.0.5.7 Replace spark plugs and wires
9.0.5.8 Clean and adjust spark plug gap
9.0.5.9 Check specific gravity of battery
9.0.5.10 Inspect and adjust or change breaker points
9.0.5.11 Troubleshoot problems
9.0.5.12 Time engine*

Competency 9.0.6: Service belt and drive chain assemblies

Competency Builders:

9.0.6.1 Follow general safety precautions
9.0.6.2 Replace belts
9.0.6.3 Maintain gear drives
9.0.6.4 Clean sprockets, chains, and gears
9.0.6.5 Replace gears
9.0.6.6 Replace and adjust chains
9.0.6.7 Replace pulleys
9.0.6.8 Replace rollers
9.0.6.9 Clean and lubricate drive parts
9.0.6.10 Troubleshoot problems

Competency 9.0.7: Repair and service wheels and tires

Competency Builders:

9.0.7.1 Follow general safety precautions
9.0.7.2 Check tire pressure
9.0.7.3 Check and tighten lug nuts
9.0.7.4 Protect tires during equipment storage
9.0.7.5 Remove and replace wheels
9.0.7.6 Adjust wheel spacing
9.0.7.7 Service wheel bearing assembly
9.0.7.8 Troubleshoot problems

Competency 9.0.8: Service hydraulic systems

Competency Builders:

9.0.8.1 Follow general safety precautions
9.0.8.2 Check and add oil
9.0.8.3 Check gauges with each operation
9.0.8.4 Replace oil filter
9.0.8.5 Bleed air from system
9.0.8.6 Inspect cylinder for oil leaks
9.0.8.7 Drain, clean, flush, and refill hydraulic system
9.0.8.8 Inspect and replace lines
9.0.8.9 Troubleshoot problems

Competency 9.0.9: Hitch equipment to power units

Competency Builders:

9.0.9.1 Follow general safety precautions
9.0.9.2 Connect front-end-operated equipment
9.0.9.3 Connect 3-point-hitch equipment
9.0.9.4 Attach and detach power-take-off equipment
9.0.9.5 Hitch towed equipment
9.0.9.6 Connect hydraulic lines
9.0.9.7 Connect electrical hookups
9.0.9.8 Connect safety chains

Competency 9.0.10: Operate equipment and vehicles

Competency Builders:

9.0.10.1 Follow general safety precautions
9.0.10.2 Identify operation fundamentals
9.0.10.3 Refuel power units
9.0.10.4 Add wheel and front-end weights
9.0.10.5 Use prestart mechanism
9.0.10.6 Start engine
9.0.10.7 Read equipment gauges
9.0.10.8 Operate equipment and vehicles under work conditions and on public roads according to manufacturers' specifications and state and/or federal guidelines
9.0.10.9 Use hand operating signals

Competency 9.0.11: Operate and maintain small engines

Competency Builders:

9.0.11.1 Follow general safety precautions
9.0.11.2 Check fuel level and fuel engine
9.0.11.3 Schedule fluid and filter changes
9.0.11.4 Select oil
9.0.11.5 Check oil level
9.0.11.6 Change oil and oil filters
9.0.11.7 Start, operate, and shut down engine
9.0.11.8 Mix gas and oil for two-cycle engine
9.0.11.9 Clean external engine components
9.0.11.10 Service air cleaner
9.0.11.11 Remove, clean, and regap spark plugs
9.0.11.12 Replace starter cord
9.0.11.13 Service and clean crankcase breathers
9.0.11.14 Service and clean fuel strainer
9.0.11.15 Check and service battery
9.0.11.16 Clean and adjust carburetor
9.0.11.17 Store engine
9.0.11.18 Troubleshoot problems
9.0.11.19 Remove manifold carbon deposits*
9.0.11.20 Pull and replace flywheel and clutch assembly*
9.0.11.21 Check engine compression*

Competency 9.0.12: Clean and store equipment

Competency Builders:

9.0.12.1 Follow general safety precautions
9.0.12.2 Remove debris from equipment
9.0.12.3 Steam or high-pressure wash equipment
9.0.12.4 Protect equipment from weather
9.0.12.5 Lubricate equipment for storage

Competency 9.0.13: Plan and maintain construction of farm structures

Competency Builders:

9.0.13.1 Follow general safety precautions
9.0.13.2 Select types of structures required
9.0.13.3 Determine life expectancy of structure
9.0.13.4 Determine space requirements
9.0.13.5 Design plans for new structures or improvement/expansion of current structures
9.0.13.6 Interpret blueprints
9.0.13.7 Select building materials
9.0.13.8 Identify grading categories for softwood and hardwood
9.0.13.9 Identify nominal and dressed sizes of lumber
9.0.13.10 Calculate board footage of lumber
9.0.13.11 Develop bill of materials
9.0.13.12 Determine soil and water table characteristics of building site*
9.0.13.13 Determine manure-handling methods*
9.0.13.14 Determine ventilation system*
9.0.13.15 Determine insulation*
9.0.13.16 Define zoning requirements and permits*

Competency 9.0.14: Construct with concrete

Competency Builders:

9.0.14.1 Follow general safety precautions
9.0.14.2 Use survey level
9.0.14.3 Select concrete materials and additives
9.0.14.4 Select concrete tools
9.0.14.5 Identify differences between concrete and cement
9.0.14.6 Determine mix needed
9.0.14.7 Calculate volume of concrete to order or mix
9.0.14.8 Excavate structure sites for concrete pouring
9.0.14.9 Install concrete reinforcement
9.0.14.10 Build and remove basic concrete forms
9.0.14.11 Mix and pour concrete
9.0.14.12 Evaluate concrete slump
9.0.14.13 Finish concrete surface
9.0.14.14 Cure concrete
9.0.14.15 Determine weather conditions for installing and curing
9.0.14.16 Mix mortar
9.0.14.17 Lay blocks

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Competency 9.0.15: Construct with wood

Competency Builders:

9.0.15.1 Follow general safety precautions
9.0.15.2 Identify types of lumber
9.0.15.3 Cut lumber to dimension
9.0.15.4 Stack, season, and store lumber
9.0.15.5 Install and repair bracing
9.0.15.6 Install and repair wood siding
9.0.15.7 Install and repair doors and hardware
9.0.15.8 Cut and fit joints
9.0.15.9 Select and apply metal fasteners
9.0.15.10 Identify and use appropriate hand and power tools
9.0.15.11 Assemble joints with glue
9.0.15.12 Clean and maintain equipment

Competency 9.0.16: Plan electrical installations*

Competency Builders:

9.0.16.1 Follow general safety precautions*
9.0.16.2 Determine required electrical permits and codes*
9.0.16.3 Determine electrical needs*
9.0.16.4 Determine type of materials*
9.0.16.5 Plan distribution system*
9.0.16.6 Plan wiring layouts*
9.0.16.7 Plan service entrance*
9.0.16.8 Select wire and electrical supplies*
9.0.16.9 Determine total cost of materials*
9.0.16.10 Select alternative electrical sources*

Competency 9.0.17: Install and maintain electrical systems

Competency Builders:

9.0.17.1 Follow general safety precautions
9.0.17.2 Read electric meter
9.0.17.3 Replace circuit breakers and fuses
9.0.17.4 Repair and replace electrical cord
9.0.17.5 Connect and disconnect alternative power sources
9.0.17.6 Select and use tools, measuring devices, and other equipment
9.0.17.7 Wire outlets and switches
9.0.17.8 Install and maintain lighting fixtures
9.0.17.9 Clean and lubricate motors
9.0.17.10 Maintain records of electrical maintenance
9.0.17.11 Install electric motors on structure
9.0.17.12 Troubleshoot problems

Competency 9.0.18: Install and maintain water systems*

Competency Builders:

9.0.18.1 Follow general safety precautions*
9.0.18.2 Determine required quantity and quality of water*
9.0.18.3 Select water source*
9.0.18.4 Determine tools and equipment needed*
9.0.18.5 Plan distribution system*
9.0.18.6 Contract for system installation*
9.0.18.7 Select pipe, pipe fittings, insulation, and plumbing fixtures*
9.0.18.8 Determine cost of materials*
9.0.18.9 Cut and fit pipe or tubing*
9.0.18.10 Thread metal pipe*
9.0.18.11 Install pipe and pipe fittings*
9.0.18.12 Install and repair valves and faucets*
9.0.18.13 Install insulation*
9.0.18.14 Install filters*
9.0.18.15 Unclog pipes*
9.0.18.16 Maintain automatic waterers*
9.0.18.17 Troubleshoot problems*

Competency 9.0.19: Install and maintain fencing

Competency Builders:

9.0.19.1 Follow general safety precautions
9.0.19.2 Identify options in fencing systems
9.0.19.3 Determine amount of fence required
9.0.19.4 Select fencing materials
9.0.19.5 Select posts and braces
9.0.19.6 Select finish or preservative
9.0.19.7 Select fasteners
9.0.19.8 Lay out and stretch fence
9.0.19.9 Install posts and braces
9.0.19.10 Install gates
9.0.19.11 Install fasteners
9.0.19.12 Select and install electric charging units

Competency 9.0.20: Use and maintain hand and power tools

Competency Builders:

9.0.20.1 Follow general safety precautions
9.0.20.2 Identify tools
9.0.20.3 Select tools
9.0.20.4 Follow operation instructions
9.0.20.5 Set up and adjust tools
9.0.20.6 Clean and lubricate tools
9.0.20.7 Store tools
9.0.20.8 Sharpen tools

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Competency 9.0.21: Weld with gas

Competency Builders:

9.0.21.1 Follow general safety precautions
9.0.21.2 Set up and adjust gas welding equipment
9.0.21.3 Select rod
9.0.21.4 Select and apply flux
9.0.21.5 Cut metal
9.0.21.6 Weld steel in horizontal positions
9.0.21.7 Weld steel in nonhorizontal positions
9.0.21.8 Weld steel with filler rod
9.0.21.9 Weld steel by fusion
9.0.21.10 Braze metal
9.0.21.11 Hardsurface metal
9.0.21.12 Clean and store equipment
9.0.21.13 Secure and store gas cylinders

Competency 9.0.22: Weld using electric arc and MIG methods

Competency Builders:

9.0.22.1 Follow general safety precautions
9.0.22.2 Select welding equipment and accessories
9.0.22.3 Select electrode sizes and types
9.0.22.4 Select settings
9.0.22.5 Prepare metal
9.0.22.6 Weld steel in nonhorizontal positions
9.0.22.7 Weld pipe
9.0.22.8 Cut metal using electrode
9.0.22.9 Clean and store equipment
9.0.22.10 Weld steel in horizontal positions*
9.0.22.11 Hardsurface metal*
9.0.22.12 Weld cast iron*

Competency 9.0.23: Fabricate with metal

Competency Builders:

9.0.23.1 Follow general safety precautions
9.0.23.2 Identify types of metal
9.0.23.3 Design plans
9.0.23.4 Prepare bill of materials
9.0.23.5 Measure thickness of sheet metal
9.0.23.6 Test metal for type and hardness
9.0.23.7 Punch and drill metal
9.0.23.8 Cut metal
9.0.23.9 Select thread and size for tap or die
9.0.23.10 Thread hole or rod
9.0.23.11 Grind metal
9.0.23.12 Join metal with pop rivets
9.0.23.13 Join metal with spot welder
9.0.23.14 Bend sheet metal
9.0.23.15 Store metal

Competency 9.0.24: Solder

Competency Builders:

9.0.24.1 Follow general safety precautions
9.0.24.2 Select soldering method
9.0.24.3 Select tools
9.0.24.4 Select flux
9.0.24.5 Select solder
9.0.24.6 Prepare surfaces
9.0.24.7 Apply solder
9.0.24.8 Clean equipment

Competency 9.0.25: Apply protective coatings

Competency Builders:

9.0.25.1 Follow general safety precautions
9.0.25.2 Determine type and quality of coating
9.0.25.3 Use steam cleaner and pressure washer
9.0.25.4 Use paint and varnish remover
9.0.25.5 Sand surface
9.0.25.6 Apply masking tape
9.0.25.7 Thin paint
9.0.25.8 Select and use application tools
9.0.25.9 Apply primer coat
9.0.25.10 Apply finish coat
9.0.25.11 Apply metal preservative
9.0.25.12 Apply wood preservative
9.0.25.13 Clean application tools

Unit 10: Crop and Forage Production

Competency 10.0.1: Evaluate soil characteristics

Competency Builders:

10.0.1.1 Evaluate soil drainage
10.0.1.2 Identify soil texture and percentage of organic matter
10.0.1.3 Identify soil structure and type
10.0.1.4 Determine slope
10.0.1.5 Determine suitability of soil for agricultural uses
10.0.1.6 Determine suitability of soil for nonagricultural uses
10.0.1.7 Evaluate problems affecting soil use and management
10.0.1.8 Determine and implement management and conservation practices
10.0.1.9 Comply with government regulations and guidelines

Competency 10.0.2: Prepare for crop planting

Competency Builders:

10.0.2.1 Identify seeds
10.0.2.2 Interpret seed tag information

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10.0.2.3 Determine crops to plant
10.0.2.4 Establish crop rotation
10.0.2.5 Select seed
10.0.2.6 Conduct seed germination and vigor tests
10.0.2.7 Inoculate seed
10.0.2.8 Determine seeding rate
10.0.2.9 Store seed

Competency 10.0.3: Plant and till crops

Competency Builders:

10.0.3.1 Follow general safety precautions
10.0.3.2 Select planting or seeding method and date
10.0.3.3 Prepare seedbed according to chosen planting method
10.0.3.4 Determine planting depth and rate
10.0.3.5 Calibrate planting equipment
10.0.3.6 Operate planting equipment
10.0.3.7 Compact seedbed after seeding
10.0.3.8 Cultivate crops
10.0.3.9 Identify planting failure problems

Competency 10.0.4: Test soil and plant tissues

Competency Builders:

10.0.4.1 Take soil samples by soil type within fields
10.0.4.2 Submit prepared soil samples and forms to analysis laboratory
10.0.4.3 Interpret soil analysis results
10.0.4.4 Take plant tissue samples
10.0.4.5 Submit prepared plant tissue samples and forms to analysis laboratory
10.0.4.6 Interpret plant analysis results

Competency 10.0.5: Determine fertilization needs

Competency Builders:

10.0.5.1 Identify factors influencing fertilizer requirements
10.0.5.2 Use soil analysis results to determine soil nutrient levels
10.0.5.3 Identify plant nutrient and trace mineral deficiency symptoms
10.0.5.4 Determine crop nutrient needs
10.0.5.5 Determine amounts and kinds of nutrients and lime to apply
10.0.5.6 Evaluate effects of leaching on nutrient availability
10.0.5.7 Evaluate effects of soil pH on nutrient availability
10.0.5.8 Analyze and interpret manure sample information

Competency 10.0.6: Develop fertilization plan

Competency Builders:

10.0.6.1 Interpret fertilization rate charts
10.0.6.2 Select fertilizer analysis
10.0.6.3 Select fertilizer application method
10.0.6.4 Estimate costs of recommended amounts of lime and fertilizer
10.0.6.5 Determine time for fertilizer application
10.0.6.6 Determine amount of lime needed to maintain pH levels

Competency 10.0.7: Fertilize crops

Competency Builders:

10.0.7.1 Follow general safety precautions
10.0.7.2 Mix fertilizer solutions
10.0.7.3 Calibrate fertilizer application equipment
10.0.7.4 Adjust fertilizer application rates
10.0.7.5 Transfer liquid fertilizer from nurse tank to applicator
10.0.7.6 Use equipment to apply fertilizer
10.0.7.7 Recognize signs of fertilizer injury
10.0.7.8 Follow safety factors involved in handling NH_3*

Competency 10.0.8: Plan insect and disease control program*

Competency Builders:

10.0.8.1 Identify insects and diseases*
10.0.8.2 Recognize insect and disease damage*
10.0.8.3 Estimate insect population numbers*
10.0.8.4 Assess degree of damage*
10.0.8.5 Determine when controls are needed*
10.0.8.6 Complete prescribed chemical application certification requirements*
10.0.8.7 Evaluate chemical/cultural/biological control options*
10.0.8.8 Interpret chemical labels and compatibility charts*
10.0.8.9 Select chemicals*
10.0.8.10 Estimate cost of control program*

Competency 10.0.9: Plan weed control program

Competency Builders:

10.0.9.1 Identify weeds
10.0.9.2 Identify weed and crop plants as monocots or dicots
10.0.9.3 Identify weed and crop plants as annuals, biennials, or perennials
10.0.9.4 Identify parts and functions of weed and crop plants
10.0.9.5 Determine type of control needed*
10.0.9.6 Select chemicals*
10.0.9.7 Select application method*
10.0.9.8 Estimate cost of control program*

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Competency 10.0.10: Apply chemical treatments*

Competency Builders:

10.0.10.1 Follow general safety precautions*
10.0.10.2 Use proper chemical-handling procedures*
10.0.10.3 Wear protective clothing and equipment*
10.0.10.4 Calibrate application equipment*
10.0.10.5 Mix chemicals and load application equipment*
10.0.10.6 Use application equipment*
10.0.10.7 Follow chemical-use regulations*
10.0.10.8 Dispose of containers in proper manner*
10.0.10.9 Follow proper cleaning and storing procedures*
10.0.10.10 Maintain application record*
10.0.10.11 Recognize chemical injury*
10.0.10.12 Use Integrated Pest Management*

Competency 10.0.11: Use cultural control methods for insects, weeds, and diseases

Competency Builders:

10.0.11.1 Cultivate fields
10.0.11.2 Clip fields
10.0.11.3 Rotate crops
10.0.11.4 Use Integrated Pest Management*

Competency 10.0.12: Harvest grain crops

Competency Builders:

10.0.12.1 Follow general safety precautions
10.0.12.2 Determine stage of crop maturity
10.0.12.3 Determine moisture content
10.0.12.4 Determine proper harvesting conditions
10.0.12.5 Determine acreage to harvest at one time
10.0.12.6 Operate harvesting machinery
10.0.12.7 Clip grain stubble after harvesting
10.0.12.8 Calculate crop yields
10.0.12.9 Estimate harvest loss

Competency 10.0.13: Harvest and manage forages

Competency Builders:

10.0.13.1 Follow general safety precautions
10.0.13.2 Determine stage of crop maturity
10.0.13.3 Determine moisture content
10.0.13.4 Determine forage cuttings to harvest
10.0.13.5 Determine acreage to harvest at one time
10.0.13.6 Determine proper harvesting conditions
10.0.13.7 Cut and condition hay
10.0.13.8 Rake and ted hay
10.0.13.9 Evaluate harvesting methods
10.0.13.10 Bale dried forages and bedding materials
10.0.13.11 Cut forages for green chop feeding
10.0.13.12 Determine harvest yields and nutritional content
10.0.13.13 Determine grazing intervals and stocking rates
10.0.13.14 Evaluate grazing methods

Competency 10.0.14: Store harvested crops

Competency Builders:

10.0.14.1 Follow general safety precautions
10.0.14.2 Estimate amount of storage needed
10.0.14.3 Identify and select storage facilities
10.0.14.4 Unload grain trucks and wagons
10.0.14.5 Estimate amount of grain in storage
10.0.14.6 Clean and disinfect storage facilities*

Competency 10.0.15: Maintain quality of stored crops

Competency Builders:

10.0.15.1 Follow general safety precautions
10.0.15.2 Collect crop samples
10.0.15.3 Determine safe moisture content for stored crops
10.0.15.4 Determine condition of stored crops
10.0.15.5 Control temperature and humidity
10.0.15.6 Identify insect, disease, and environmental problems
10.0.15.7 Clean storage areas
10.0.15.8 Operate dryer and fans and related equipment*
10.0.15.9 Control pests*

Unit 11: Employability Skills
Subunit 11.1: Career Development

Competency 11.1.1: Investigate career options

Competency Builders:

11.1.1.1 Determine interests and aptitudes
11.1.1.2 Identify career options
11.1.1.3 Research occupations matching interests and aptitudes
11.1.1.4 Select career(s) that best match(es) interests and aptitudes
11.1.1.5 Identify advantages and disadvantages of career options, including nontraditional careers
11.1.1.6 Assess differences in wages, annual incomes, and job opportunities based on geographic location
11.1.1.7 Develop a career plan

Competency 11.1.2: Analyze potential barriers to employment

Competency Builders:

11.1.2.1 Identify common barriers to employment
11.1.2.2 Describe strategies to overcome employment barriers

Unit 11: Employability Skills
Subunit 11.2: Decision Making and Problem Solving

Competency 11.2.1: Apply decision-making techniques in the workplace

Competency Builders:

11.2.1.1 Identify the decision to be made
11.2.1.2 Compare alternatives
11.2.1.3 Determine consequences of each alternative
11.2.1.4 Make decisions based on values and goals
11.2.1.5 Evaluate the decision made

Competency 11.2.2: Apply problem-solving techniques in the workplace

Competency Builders:

11.2.2.1 Diagnose the problem and its causes
11.2.2.2 Identify alternatives and their consequences in relation to the problem
11.2.2.3 Examine multicultural and nonsexist dimensions of problem solving
11.2.2.4 Utilize resources to explore possible solutions to the problem
11.2.2.5 Compare and contrast the advantages and disadvantages of each solution
11.2.2.6 Determine appropriate action
11.2.2.7 Evaluate results

Unit 11: Employability Skills
Subunit 11.3: Work Ethic

Competency 11.3.1: Evaluate the relationship of self-esteem to work ethic

Competency Builders:

11.3.1.1 Identify special characteristics and abilities in self and others
11.3.1.2 Identify internal and external factors that affect self-esteem

Competency 11.3.2 Analyze the relationship of personal values and goals to work ethic both in and out of the workplace

Competency Builders:

11.3.2.1 Distinguish between values and goals
11.3.2.2 Determine the importance of values and goals
11.3.2.3 Evaluate how values affect goals
11.3.2.4 Identify short-term and long-term goals
11.3.2.5 Prioritize personal goals
11.3.2.6 Describe how personal values are reflected in work ethic
11.3.2.7 Describe how interactions in the workplace affect personal work ethic
11.3.2.8 Examine how life changes affect personal work ethic

Competency 11.3.3: Demonstrate work ethic

Competency Builders:

11.3.3.1 Examine factors that influence work ethic
11.3.3.2 Exhibit characteristics that reflect an appropriate work ethic

Unit 11: Employability Skills
Subunit 11.4: Job-Seeking Skills

Competency 11.4.1: Prepare for employment

Competency Builders:

11.4.1.1 Identify traditional and nontraditional employment sources
11.4.1.2 Utilize employment sources
11.4.1.3 Research job opportunities, including nontraditional careers
11.4.1.4 Interpret equal employment opportunity laws
11.4.1.5 Explain the critical importance of personal appearance, hygiene, and demeanor throughout the employment process
11.4.1.6 Prepare for generic employment tests and those specific to an occupation/organization

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Competency 11.4.2: Design a résumé

Competency Builders:

11.4.2.1 Identify personal strengths and weaknesses
11.4.2.2 List skills and/or abilities, career objective(s), accomplishments/achievements, educational background, and work experience
11.4.2.3 Demonstrate legible written communication skills using correct grammar, spelling, and concise wording
11.4.2.4 Complete résumé using various formats
11.4.2.5 Secure references

Competency 11.4.3: Complete and process job application forms

Competency Builders:

11.4.3.1 Explain the importance of an application form
11.4.3.2 Identify ways to obtain job application forms
11.4.3.3 Describe methods for handling illegal questions on job application forms
11.4.3.4 Demonstrate legible written communication skills using correct grammar, spelling, and concise wording
11.4.3.5 Return application to proper person, request interview, and follow up

Competency 11.4.4: Demonstrate interviewing skills

Competency Builders:

11.4.4.1 Investigate interview environment and procedures
11.4.4.2 Explain the critical importance of personal appearance, hygiene, and demeanor
11.4.4.3 Demonstrate question and answer techniques
11.4.4.4 Demonstrate methods for handling difficult and/or illegal interview questions

Competency 11.4.5: Secure employment

Competency Builders:

11.4.5.1 Identify present and future employment opportunities within an occupation/organization
11.4.5.2 Research the organization/company
11.4.5.3 Use follow-up techniques to enhance employment potential
11.4.5.4 Compare and evaluate job offers

Unit 11: Employability Skills
Subunit 11.5: Job Retention Skills

Competency 11.5.1: Analyze the organizational structure of the workplace

Competency Builders:

11.5.1.1 Identify and evaluate employer expectations regarding job performance, work habits, attitudes, personal appearance, and hygiene
11.5.1.2 Be aware of and obey all company policies and procedures
11.5.1.3 Examine the role/relationship between employee and employer
11.5.1.4 Recognize opportunities for advancement and reasons for termination

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Competency 11.5.2: Maintain positive relations with others

Competency Builders:

11.5.2.1 Exhibit appropriate work habits and attitude
11.5.2.2 Identify behaviors to establish successful working relationships
11.5.2.3 Cooperate and compromise through teamwork and group participation
11.5.2.4 Identify alternatives for dealing with harassment, bias, and discrimination based on race, color, national origin, sex, religion, handicap, or age

Unit 11: Employability Skills
Subunit 11.6: Job Advancement

Competency 11.6.1: Analyze opportunities for personal and career growth

Competency Builders:

11.6.1.1 Determine opportunities within an occupation/organization
11.6.1.2 Compare and contrast other opportunities
11.6.1.3 List benefits of job advancement
11.6.1.4 Evaluate factors involved when assuming a new position within or outside an occupation/organization

Competency 11.6.2: Exhibit characteristics needed for advancement

Competency Builders:

11.6.2.1 Display a positive attitude
11.6.2.2 Demonstrate knowledge of a position
11.6.2.3 Perform quality work
11.6.2.4 Adapt to changing situations and technology
11.6.2.5 Demonstrate capability for different positions
11.6.2.6 Participate in continuing education/training programs
11.6.2.7 Respect, accept, and work with ALL individuals in the workplace

Unit 11: Employability Skills
Subunit 11.7: Technology in the Workplace

Competency 11.7.1: Assess the impact of technology in the workplace

Competency Builders:

11.7.1.1 Cite how past business/industry practices have influenced present business/industry processes
11.7.1.2 Investigate the use of technology in the workplace
11.7.1.3 Analyze how present skills can be applied to learning new technologies

Competency 11.7.2: Use a variety of technological applications

Competency Builders:

11.7.2.1 Explore basic mathematical, scientific, computer, and technological principles
11.7.2.2 Use technology to accomplish assigned tasks
11.7.2.3 Create solutions to problems using technical means

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Unit 11: Employability Skills
Subunit 11.8: Lifelong Learning

Competency 11.8.1: Apply lifelong learning to individual situations

Competency Builders:

11.8.1.1 Define lifelong learning
11.8.1.2 Identify factors that cause the need for lifelong learning

Competency 11.8.2: Adapt to change

Competency Builders:

11.8.2.1 Analyze the effects of change
11.8.2.2 Identify reasons why goals change
11.8.2.3 Describe the importance of flexibility when reevaluating goals
11.8.2.4 Evaluate the need for continuing education/training

Unit 11: Employability Skills
Subunit 11.9: Economic Education

Competency 11.9.1: Analyze global enterprise system

Competency Builders:

11.9.1.1 Identify characteristics of various enterprise systems
11.9.1.2 Examine the relationship between competition, risk, and profit
11.9.1.3 Illustrate how supply and demand influence price

Competency 11.9.2: Evaluate personal money management

Competency Builders:

11.9.2.1 Describe the need for personal management records
11.9.2.2 Identify methods of taxation
11.9.2.3 Analyze how credit affects financial security
11.9.2.4 Compare types and methods of investments
11.9.2.5 Prepare a personal budget
11.9.2.6 Be an informed and responsible consumer
11.9.2.7 Analyze the effects of advertising on the consumer

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Unit 11: Employability Skills
Subunit 11.10: Balancing Work and Family

Competency 11.10.1: Analyze the effects of family on work

Competency Builders:

11.10.1.1 Recognize how family values, goals, and priorities are reflected in the workplace
11.10.1.2 Identify present and future family structures and responsibilities
11.10.1.3 Describe personal and family roles
11.10.1.4 Analyze concerns of working parent(s)
11.10.1.5 Examine how family responsibilities can conflict with work
11.10.1.6 Resolve family-related conflicts
11.10.1.7 Explain how to use support systems/community resources to help resolve family-related conflicts

Competency 11.10.2: Analyze the effects of work on family

Competency Builders:

11.10.2.1 Identify responsibilities associated with paid and nonpaid work
11.10.2.2 Compare the advantages and disadvantages of multiple incomes
11.10.2.3 Explain how work can conflict with family responsibilities
11.10.2.4 Explain how work-related stress can affect families
11.10.2.5 Identify family support systems and resources

Unit 11: Employability Skills
Subunit 11.11: Citizenship in the Workplace

Competency 11.11.1: Exercise the rights and responsibilities of citizenship in the workplace

Competency Builders:

11.11.1.1 Identify the basic rights and responsibilities of citizenship
11.11.1.2 Examine the history and contributions of all racial, ethnic, and cultural groups

Competency 11.11.2: Cooperate with others in the workplace

Competency Builders:

11.11.2.1 Identify situations in which compromise is necessary
11.11.2.2 Examine how individuals from various backgrounds contribute to work-related situations
11.11.2.3 Demonstrate initiative to facilitate cooperation
11.11.2.4 Give and receive constructive criticism to enhance cooperation

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Unit 11: Employability Skills
Subunit 11.12: Leadership

Competency 11.12.1: Evaluate leadership styles appropriate for the workplace

Competency Builders:

11.12.1.1 Identify characteristics of effective leaders
11.12.1.2 Compare leadership styles
11.12.1.3 Demonstrate effective delegation skills
11.12.1.4 Identify opportunities to lead in the workplace

Competency 11.12.2: Demonstrate effective teamwork skills

Competency Builders:

11.12.2.1 Identify the responsibilities of a valuable group member
11.12.2.2 Exhibit open-mindedness
11.12.2.3 Identify methods of involving each member of a team
11.12.2.4 Contribute to the efficiency and success of a group
11.12.2.5 Determine ways to motivate others

Competency 11.12.3: Utilize effective communication skills

Competency Builders:

11.12.3.1 Identify the importance of listening
11.12.3.2 Demonstrate assertive communication
11.12.3.3 Recognize the importance of verbal and nonverbal cues and messages
11.12.3.4 Analyze written material
11.12.3.5 Prepare written material
11.12.3.6 Give and receive feedback
11.12.3.7 Articulate thoughts
11.12.3.8 Use appropriate language

Unit 11: Employability Skills
Subunit 11.13: Entrepreneurship

Competency 11.13.1: Evaluate the role of small business in the economy

Competency Builders:

11.13.1.1 Identify the benefits of small business to a community
11.13.1.2 Analyze opportunities for small business in a community

Competency 11.13.2: Examine considerations of starting a business

Competency Builders:

11.13.2.1 Research a business idea
11.13.2.2 Compare various ways to become a small business owner
11.13.2.3 Investigate factors to consider in financing a new business
11.13.2.4 Evaluate entrepreneurship as a career option

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